

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-30. (Cancelled)

¹
31. (Previously Presented): A method for determining whether a physiological specimen contains an analyte species, ^{comprising} where the steps consist of:

- a. capturing and isolating the analyte species from the physiological specimen using an affinity reagent having a specific affinity for the analyte species wherein the affinity reagent includes an antibody immobilized onto a solid substrate;
- b. releasing the isolated analyte species by eluting the analyte species from the antibody;
- c. ^{adding a laser desorption/ionization agent to the released and isolated analyte species to form a mass spectrometric mixture;}
- d. detecting the presence of the isolated and released analyte species using a mass spectrometer to determine whether the analyte species was present in the physiological specimen; and
- e. determining the identity of the analyte species by using molecular weight analysis.

2

32. (Currently Amended): The method of claim 31 wherein the step of capturing and isolating the analyte species includes the steps of:

- a. combining an effective amount of the affinity reagent with the physiological specimen until the affinity reagent binds with any of the analyte species that is present in the physiological specimen to produce a post-combination affinity reagent and an unbound remainder of the physiological specimen; and
- b. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent; and.

³
33. (Previously Presented): The method of claim ²32 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

⁴
34. (Previously Presented): The method of claim ²32 wherein the step of releasing the isolated analyte species includes the step of adding a disassociation agent to the isolated post-combination affinity reagent.

⁵
35. (Previously Presented): The method of claim ⁴34 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

⁶
36. (Currently Amended): A method for determining whether a physiological specimen contains more than one analyte species, ^{comprising} where the steps consist of:

a. capturing and isolating more than one analyte species from the physiological specimen using an affinity reagent having a specific affinity for more than one analyte species wherein the affinity reagent includes more than at least one antibody for each analyte species immobilized onto

a solid substrate;

^{line 7}
b. ^{releasing the isolated analyte species from the antibodies.}
c. ^{adding a laser desorption/ionization agent to the released and isolated analyte species to form a mass spectrometric mixture;}
d. detecting the presence of the more than one isolated ^{and released} analyte species by

using a mass spectrometer to determine whether each of the more than one analyte species was present in the physiological specimen; and

e. determining the identity of the more than one analyte species by using molecular weight analysis.

⁷
37. (Previously Presented): The method of claim ⁶36 wherein the step of capturing and isolating each of the more than one analyte species includes the steps of:

a. combining an effective amount of the affinity reagent with the physiological specimen until the affinity reagent binds with

each of the more than one analyte species that is present in the physiological specimen to produce a post-combination affinity reagent and an unbound remainder of the physiological specimen;

- b. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent; and
- c. ~~adding a laser desorption/ionization agent to the isolated post-combination affinity reagent to form a mass spectrometric mixture.~~

⁸
38. (Previously Presented): The method of claim ⁷37 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

⁹
39. (Previously Presented): The method of claim ⁷37 further including the step of adding a disassociation agent to the isolated post-combination affinity reagent prior to the step of adding the laser desorption/ionization agent.

⁹
40. (Previously Presented): The method of claim ⁹39 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

¹¹
41. (Previously Presented): The method of claim ¹⁰36 wherein the step of capturing and isolating each of the more than one analyte species includes the steps of:

- a. immobilizing a plurality of different antibodies each specific to a different analyte species onto a solid substrate to produce said affinity reagent;
- b. combining an effective amount of the affinity reagent with the physiological specimen until the affinity reagent binds with each of the

more than one analyte species that is present in the physiological specimen to produce a post-combination affinity reagent and an unbound remainder of the physiological specimen;

- c. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent; and
- d. ~~adding a laser desorption/ionization agent to the isolated post-combination affinity reagent to form a mass spectrometric mixture.~~

¹²
42. (Previously Presented): The method of claim ¹¹41 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

¹³
43. (Previously Presented): The method of claim ¹¹41 further including the step of adding a disassociation agent to the isolated post-combination affinity reagent prior to the step of adding the laser desorption/ionization agent.

¹⁴
44. (Previously Presented): The method of claim ¹³43 wherein the step of combining an effective amount of the affinity reagent with the physiological specimen is accomplished by using a micropipette tip in which there is a filter element which retains the affinity reagent.

¹⁵
45. (Currently Amended): The method of claim ¹²32 wherein the step of detecting the presence of the isolated and released analyte species includes mass spectrometrically analyzing ~~the mass spectrometric mixture~~ the isolated post-combination affinity reagent to produce a mass spectrum, said mass spectrum indicating whether the physiological specimen contained the analyte species by exhibiting a mass spectrometric response located at a unique mass-to-charge ratio of the analyte species.

¹⁶
46. (Previously Presented): The method of claim ⁷37 wherein the step of detecting the isolated one or more analyte species includes mass spectrometrically analyzing the mass spectrometric mixture to produce a mass spectrum, said mass spectrum indicating whether the physiological specimen contained each of the more than one analyte species

by exhibiting a mass spectrometric response located at a unique mass-to-charge ratio of the more than one analyte species.

17
41. (Previously Presented): The method of claim 41 wherein the step of detecting the isolated one or more analyte species includes mass spectrometrically analyzing the mass spectrometric mixture to produce a mass spectrum, said mass spectrum indicating whether the physiological specimen contained each of the more than one analyte species by exhibiting a mass spectrometric response located at a unique mass-to-charge ratio of the more than one analyte species.

48. ~~(Previously Presented): The method of claim 31 wherein the step of detecting the presence of the isolated and released analyte species includes the step of adding a laser desorption/ionization agent to the released and isolated analyte species to form a mass spectrometric mixture.~~